

Course Syllabus for CGS3763, OPERATING SYSTEM CONCEPTS

Course Description: CGS3763, OPERATING SYSTEM CONCEPTS

PR: *CGS1060C – Introduction to Computer Science*

This course will introduce you to the fundamental concepts and design principles of modern operating systems. We'll discuss process management, process scheduling, system calls, threads, memory management, virtual memory, security, file systems, I/O management and client/server paradigms. We'll also deal with the terminology, hardware, and software associated with operating system components and structures.

Class Time and Location: Monday 2:30 P.M. to 3:20 P.M., Room HEC-103

Textbook(s): Operating System Concepts, 8e, Silberschatz, Galvin, Gagne, (2009), John Wiley & Sons, ISBN: 978-0-470-12872-5

Reference Book(s): Operating System, 3e, Deitel, Dietel, Choffnes (2003), Prentice Hall, ISBN: 978-0-131-82827-8 **and** Operating System, 3e, Gary Nutt (2003), Addison Wesley, ISBN: 978-0-201-77344-6

Professor's Information:

Name: Adeel Bhutta

Office: HEC-215

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Office hours: MW 3:30 P.M. to 5:00 P.M., Room HEC-215

Student Performance Assessment:

| Evaluation | |
|---------------------------------|----------------|
| Midterm Exams (two): 50% | 90 - 100 % = A |
| Assignments: 10% | 80 - 89 % = B |
| Quizzes: 5% | 70 - 79 % = C |
| Final Exam (Comprehensive): 35% | 60 - 69 % = D |
| | 59 - 0 % = F |
| Total: 100% | |

Important Dates:

- Fall semester starts: August 23rd
- *Drop deadline: August 26th*
- Labor Day: September 6th (No class on Monday)
- Game day: Oct 6th (No class on Wednesday)
- **Midterm Exam 1: October 11th**
- *Withdrawal deadline: October 15th*
- **Midterm Exam 2: November 17th**
- **Thanksgiving: November 25-27 (No class on Friday)**
- Fall semester ends: December 6th
- **Final Exam: December 8th (1:00 PM – 3:50 PM), HEC 103**

Class Policies:

1. All class material will be posted on webcourses. <http://webcourses.ucf.edu/>
2. All class related **communication** will be done through webcourses. It is students' responsibility to check webcourses for emails and announcements regularly.
3. Quizzes may be announced or unannounced. Student must be present in the class to receive any grade. **There will be no makeup quiz.**
4. All exam dates can be found above. ***There will be no makeup exam except for University approved functions or activities.*** You will be required to provide documentation in such case.
5. Final Exam will be **comprehensive**.
6. All students are required to work on assignments on individual basis. No group work is allowed. All assignments must be submitted through the assignment submission page of webcourses (NO EMAIL SUBMISSIONS within/outside WEBCOURSES). No late assignments will be accepted.
7. Any grade changes must be made within 7 days of the release of grades.
8. *Plagiarism or cheating will not be tolerated. Any such case will result in immediate 'F' in the class and the matter will be forwarded to Student Conduct.*
9. **The instructor reserves the right to make any changes to the syllabus and/or schedule any time during the term. Any such change will be announced in class and/or through webcourses.**

Semester Plan:

Operating System Fundamentals, Computer System Structure, Processes, Threads, Concurrent programming, CPU scheduling, Process Synchronization, Interrupt Handling, I/O System, Memory Management, Virtual memory, Deadlocks, File system, Security, Client/Server Systems

This is a general list of topics and is subject to the needs of the class. It will be altered without notice. On-line notes will supplement the text in many areas.

Note: We will update the course outline below regularly to keep track of the material covered during the week.

Last updated: 12/03/2010

| Course Outline for CGS 3763 Operating System Concepts; Fall 2010 | | | |
|---|--|----------------------------------|---------------------------------------|
| Monday Week 2010 | Topics | Exercise / Assignment | Recommended Reading |
| Week of 8/23 | Syllabus, Introduction to Operating System Concepts | | Chapter 1, 2, 13 |
| Week of 8/30 | Introduction, Hardware Considerations and Number Systems | Assignment1 | Chapter 1, 2, 13 & Reference Material |
| Week of 9/6 | Hardware, Process Management | | Chapter 3 |
| Week of 9/13 | Number Systems, Process Scheduling | | Chapter 5 |
| Week of 9/20 | Multiprocessor Scheduling, Real-time Scheduling | Assignment2 | Chapter 5, 19 |
| Week of 9/27 | Real-time Scheduling, Process Synchronization | | Chapter 19, 6 |
| Week of 10/4 | Midterm Review | | |
| Week of 10/11 | Midterm Exam 1: Oct 11 | | |
| Week of 10/18 | Process Synchronization, Memory Management | | Chapter 6, 8 |
| Week of 10/25 | Memory Management, Virtual Memory | | Chapter 8, 9 |
| Week of 11/1 | Virtual Memory | Assignment3 | Chapter 9 |
| Week of 11/7 | Storage Management | | Chapter 10 |
| Week of 11/15 | Midterm Exam 2: Nov 17 | Assignment4 (Bonus) | |
| Week of 11/22 | Protection and Security | | Chapter 14, 15 |
| Week of 11/29 | Protection, Distributed Systems | | Chapter 14, 16, 17 |
| Week of 12/6 | Final Exam: Dec 8 (1pm) | | |